

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

## REMARKS

This Amendment is responsive to the Office Action dated October 2, 2007. Applicant has amended claims 1, 7, 9, 15, 18, 23, 25, and 27-29. Claims 1-9 and 11-35 are pending.

### Claim Rejection Under 35 U.S.C. § 103(a)

In the Office Action, claims 1-8, 16, 18-27 and 29-35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Cimochowski et al. (U.S. Patent No. 5,967,986, hereinafter "Cimochowski") in view of Wallerstorfer et al. (U.S. Patent No. 5,478,995, hereinafter "Wallerstorfer"), Cimochowski in view of Lippert (U.S. Patent No. 6,634,563) or Cimochowski in view of McEowen (U.S. Patent No. 6,810,237). Claims 9, 11-23, 25, 26, 28, 29 and 33-35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Pool et al. (U.S. Patent No. 6,561,975, hereinafter "Pool") in view of Lippert or Pool in view of Wallerstorfer.

Claims 1-9 and 11-35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Taepke, II et al. (U.S. Patent No. 6,650,939, hereinafter "Taepke") in view of Lippert, Taepke in view of Wallerstorfer or Taepke in view of McEowen. Claims 1-9 and 11-35 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Miesel (U.S. Patent No. 6,162,180, hereinafter "Miesel") in view of Lippert, Miesel in view of Wallerstorfer or Miesel in view of McEowen.

Applicant respectfully traverses the rejection of the claims. The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

#### *Cimochowski*

In support of the rejection of claims 1-8, 16, 18-27, and 29-35 under 35 U.S.C. §§ 102(b)/103(a) based on Cimochowski alone or Cimochowski in view of Lippert, Wallerstorfer or McEowen, the Office Action found that the external coil disclosed by Cimochowski constitutes an antenna with a ring-like structure that defines both a channel and an aperture, reasoning that an aperture is defined as an opening and a hole, gap, or slit, and a channel is defined as a course through which something can be directed or moved.<sup>1</sup> The Office Action further asserted that the

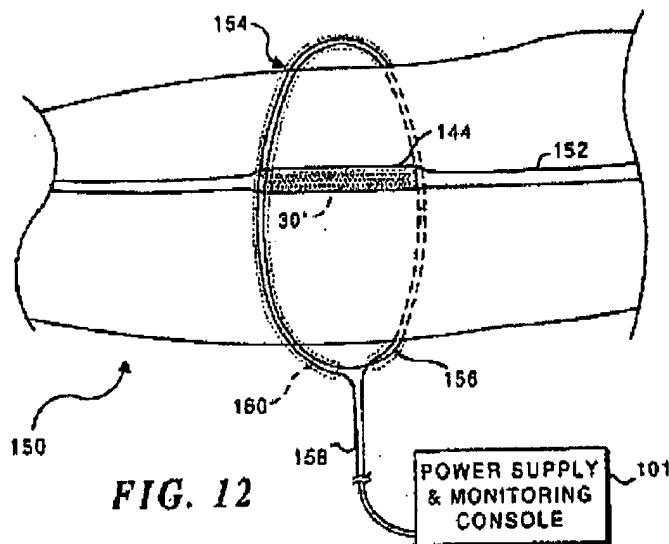
---

<sup>1</sup> Office Action at p. 3.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

ring-like antenna structure described by Cimochowski is capable of holding a portion of clothing associated with a patient due to the fact that clothing can be placed within the opening, and in turn hold the ring-shaped antenna in a relatively fixed position relative to an implanted medical device.<sup>2</sup> Applicant respectfully disagrees that the external coil described by Cimochowski is an antenna defining an aperture comprising a wide end and a channel adjacent the wide end, where the channel is narrower than the wide end and is formed to hold a portion of clothing by interference fit or friction fit to thereby hold the antenna in a substantially fixed position relative to an implantable medical device, as required by Applicant's independent claim 1 as amended.

For example, the Cimochowski reference fails to describe an antenna defining an aperture with a wide end and an adjacent, narrower channel. Cimochowski describes an antenna comprising an external coil with a ring-like structure.<sup>3</sup> As shown in FIG. 12 of Cimochowski, reproduced below, the external coil 154 defines a wide, open, circular aperture capable of wrapping around relatively large portions of a patient's body.<sup>4</sup>



**FIG. 12**

<sup>2</sup> *Id.*

<sup>3</sup> Col. 16, ll. 1-9; FIG. 12.

<sup>4</sup> Col. 16, ll. 1-9; FIG. 12.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

Clearly, a ring-like structure 154 that defines a circular aperture, as shown above in FIG. 12 of Cimochowski, cannot define an aperture that includes both a wide end and a channel that is narrower than the wide end disposed adjacent to each other, e.g., as in the exemplary embodiment shown in Applicant's FIG. 6A, reproduced below. In FIG. 6A, the external antenna 34 defines an aperture 78 with a wide end 80 and a narrow end 82 adjacent to the wide end 80.<sup>5</sup> The ring-like coil 154 described by Cimochowski does not include both a wide end and a narrow channel.

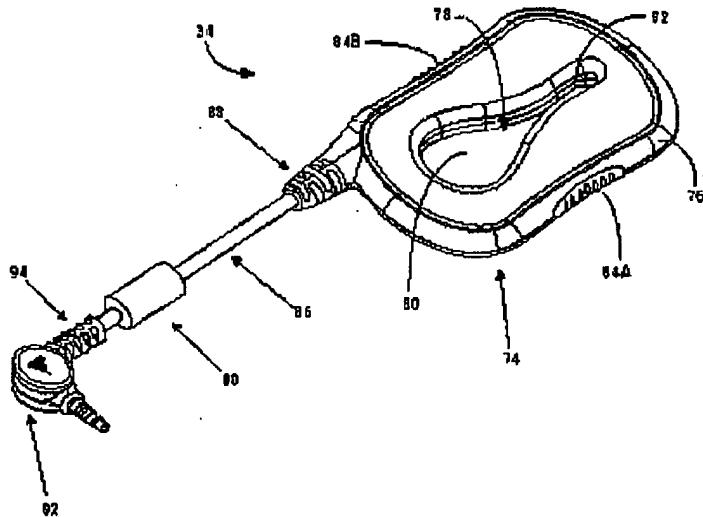


Fig. 6A

Cimochowski fails to even mention attaching the antenna to an item of clothing of the patient. Instead, Cimochowski describes an antenna having a wide, open aperture capable of wrapping around relatively large portions of a patient's body, and makes no mention of any structure resembling a channel that is formed to hold a portion of clothing of a patient in order to position the antenna relative to an implantable medical device within the patient. For example, Cimochowski explicitly discloses that the external coil antenna includes a plurality of turns sufficient in diameter to encompass the thigh of a patient.<sup>6</sup> Cimochowski further states that the external coil antenna can be made sufficiently large to encompass the portion of the body in which the implanted stent is disposed, such as the torso, another limb of the patient, or the neck of the patient.<sup>7</sup>

<sup>5</sup> Applicant's originally-filed disclosure at paragraph [0094].

<sup>6</sup> Col. 16, ll. 1-9.

<sup>7</sup> Col. 16, ll. 13-16.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

In the Response to Arguments, the Office Action reasoned that if a wearer of the Cimochowski device is wearing clothing, the Cimochowski antenna would necessarily encircle the clothing of the limb as well as the limb. According to the Office Action, “[i]n this configuration, it is well within reason to consider the antenna to be holding a portion of an item of clothing associated with a patient.” However, the Office Action appears to be disregarding the language of claim 1, which explicitly requires the antenna to define a wide end and an adjacent, narrower channel, whereby the channel is formed to hold a portion of an item of clothing. Cimochowski does not disclose an antenna including a wide end and a narrow channel, and, therefore, cannot anticipate claim 1.

Furthermore, an external coil that is wrapped around a patient’s leg does not “hold” the clothing of the patient merely because the coil encircles the clothing. As Applicant’s disclosure provides, when clothing is received in the channel of the antenna, a friction fit or interference fit between the antenna and clothing holds the antenna in place relative to the implantable medical device.<sup>8</sup> Thus, “holding” requires some interference fit or friction fit between the clothing and the channel defined by the antenna. Applicant has amended claim 1 to clarify this point.

Cimochowski fails to disclose or suggest that its an antenna is held in a substantially fixed position relative to an implantable medical device via an interference fit or friction fit between a channel of an antenna and clothing associated with a patient, as required by Applicant’s claim 1. Instead, the Cimochowski antenna encompasses a portion of a body, such as a torso, limb or neck of the patient, without regard to whether the antenna has an interference fit or friction fit with the clothing.

In apparent recognition of the failure of Cimochowski to teach or suggest an antenna that defines an aperture comprising a wide end and a channel adjacent the wide end, where the channel is narrower than the wide end, as recited by Applicant’s independent claim 1, the Office Action stated that “Cimochowski . . . does not expressly disclose that the aperture has a wide end and a narrow channel adjacent the wide end.”<sup>9</sup> The Office Action cited Lippert, Wallerstorfer, and McEowen as teaching these elements of Applicant’s independent claims. However, Lippert, Wallerstorfer, and McEowen each fail to teach or suggest an antenna that defines an aperture

<sup>8</sup> Applicant’s disclosure at paragraph [0095].

<sup>9</sup> Office Action at p. 3.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

comprising a wide end and a channel adjacent the wide end and formed to hold a portion of an item of clothing associated with a patient by an interference fit or friction fit, where the channel is narrower than the wide end, as recited in independent claim 1.

The Office Action found that the aperture 47 shown in FIG. 10 of Wallerstorfer and column 6, lines 44-66 of Wallerstorfer disclose an antenna comprising a wide end and a channel adjacent to the wide end formed to hold a portion of an item of clothing.<sup>10</sup> Applicant notes that the reference number "47" in FIG. 10 of Wallerstorfer refers to a base part of a fastening element 30, and not to an antenna. While at first glance, FIG. 10 of Wallerstorfer may appear to illustrate an aperture comprising a wide end and a channel adjacent to the wide end formed to hold a portion of an item of clothing, a closer look at Wallerstorfer indicates that Wallerstorfer, among other things, fails to disclose either an antenna that defines an aperture comprising the wide end and an adjacent channel, or an aperture that is formed to hold a portion of an item of clothing associated with a patient by an interference fit or friction fit, and thereby hold the antenna in a substantially fixed position relative to an implantable medical device.

Wallerstorfer merely describes fastening mechanisms for tags, where the tags could include an antenna. Wallerstorfer does not contemplate integration of the fastening mechanism with an antenna itself. In contrast, Applicant's independent claims recite an antenna with specific structure integrally formed with it to permit the antenna to hold an item of clothing by interference fit or friction fit. Applicant's independent claim 1 does not recite an antenna and a separate fastener, as shown by Wallerstorfer.

Moreover, Applicant does not agree that the fastening element 30 shown in FIG. 10 of Wallerstorfer illustrates an aperture comprising a wide end and a channel adjacent to the wide end and narrower than the wide end, whereby the channel is formed to hold a portion of an item of clothing and hold an antenna in a substantially fixed position. It is unclear what portions of the fastening element 30 the Office Action considers to be a wide end and a narrower adjacent channel that is formed to hold a portion of clothing. It appears that the fastening element 30 does not define a wide end and a narrow channel. The narrower end of the fastening element 30 in Wallerstorfer does not define a channel, much less a channel that is formed to hold a portion of an item of clothing by interference fit or friction fit, as required by claim 1.

---

<sup>10</sup> Office Action at p. 4.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

Wallerstorfer illustrates a fastening element 30 with a latch that enables the fastening element to be opened<sup>11</sup>, rather than an antenna defining an aperture. Applicant's independent claims are not intended to claim all apertures that are formed to couple in some way to clothing. Instead, Applicant's independent claims clearly recite an antenna for a medical device, where the antenna defines an aperture comprising a wide end and a channel adjacent the wide end, and where the channel is formed to hold a portion of an item of clothing. To clarify this point even further, Applicant added dependent claim 30 in the previously filed Amendment. Claim 30, which depends from claim 1, specifies that the antenna includes a housing defining the aperture comprising the wide end and the channel adjacent the wide end, an antenna loop disposed within the body, and a cable configured to couple the antenna to a medical device programmer. The Office Action failed to address how the Wallerstorfer data carrier or the Cimochowski coil disclose an antenna that includes a housing defining an aperture comprising a wide end and an adjacent, narrow channel, and an antenna loop disposed within the housing. Applicants request that the next action fully consider the limitations of claim 30.

In addition to failing to disclose an antenna defining a wide end and an adjacent, narrower channel, Wallerstorfer also fails to disclose an antenna or any structure that defines a channel that is formed to hold a portion of an item of clothing associated with a patient by an interference fit or friction fit, as recited by independent claim 1 as amended. While Wallerstorfer states that the fastening element 30 may be used to hang a data carrier on a piece of clothing,<sup>12</sup> Wallerstorfer does not disclose that the item of clothing may be held by an interference fit or friction fit within a channel of an aperture defined by the fastening element 30, nor any structure capable of providing such a fit. The Wallerstorfer device includes the fastening element 30 as well as a cord 24 that can be pulled out of the device against spring force while the fastening element 30 is hung on a piece of clothing.<sup>13</sup> Because the purpose of the fastening element 30 in Wallerstorfer is to secure the device to clothing as the cord 24 is pulled from the device, it seems a more secure attachment mechanism, such as a fastening element 30 that interlocks with a loop of a zipper, would be more likely than a friction fit between the aperture defined by the fastening element 30 and clothing.

<sup>11</sup> Col. 5, l. 58 – col. 6, l. 6; *see also* FIG. 16.

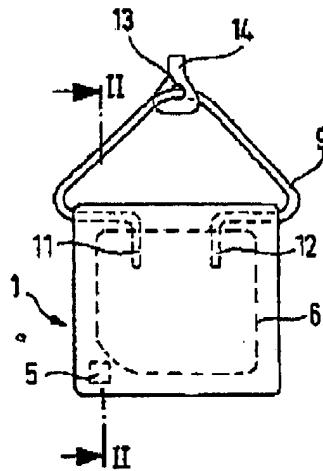
<sup>12</sup> Wallerstorfer at col. 5, ll. 34-35.

<sup>13</sup> *Id.* at col. 5, ll. 35-36.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

The Office Action found that the Abstract of Lippert discloses the antenna claimed in Applicant's independent claim 1.<sup>14</sup> Applicant disagrees that Lippert discloses an antenna defining an aperture comprising a wide end and an adjacent, narrower channel, where the channel is formed to hold a portion of an item of clothing associated with a patient by interference fit or friction fit. Lippert describes an identity card that includes a separate antenna 6 and loop 9.<sup>15</sup> Lippert does not disclose that the antenna 6 is used to communicate with an implantable medical device.

FIG.1



The loop 9 does not define a wide end and an adjacent, narrower channel. According to the Office action, a channel is a "course through which something can be directed or moved."<sup>16</sup> While one portion of the loop 9 may be considered a wide end, it is unclear what portion of the loop 9 the Office Action considers to be a channel, i.e., according to the Office Action's interpretation (which Applicant does not necessarily agree with), a structure defining a course through which something can be directed or moved. The triangular structure of the loop 9, as shown in FIG. 1 above, does not define a separate, narrower "course through which something can be directed or moved." Clearly, a structure that defines a triangular aperture cannot define an aperture that includes both a wide end and a channel that is narrower than the wide end disposed adjacent to each other.

<sup>14</sup> Office Action at p. 4.

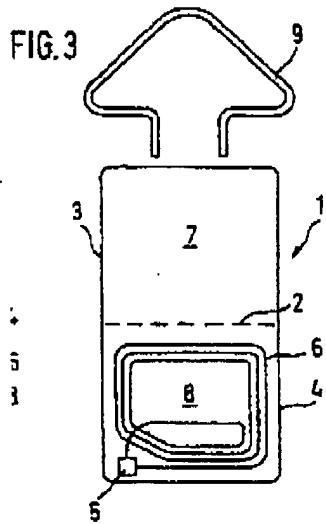
<sup>15</sup> Lippert at Abstract.

<sup>16</sup> Office Action at p. 3.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

In addition, the loop 9 is not formed to hold a portion of clothing by interference fit or friction fit, as required by Applicant's claim 1. Lippert explicitly states that the loop 9 (shown in FIG. 1, reproduced below) is attached to "an eye or similar aperture in the clothing of an entitled user."<sup>17</sup> As shown in FIG. 1 above, the loop 9 is attached to a tab 14 of a zip fastener runner on the clothing of the user.<sup>18</sup> Lippert does not contemplate any other technique for holding the loop 9 in a substantially fixed position.

As another example of the deficiencies in the Lippert reference, Lippert does not teach that the loop 9 shown in FIG. 1 is defined by an antenna, as set forth in Applicant's independent claim 1. Applicant's independent claim 1 recite an antenna that includes structure integrally formed therewith to permit the antenna to hold an item of clothing. On the other hand, the antenna 6 and the loop 9 in the Lippert device are separate elements. The antenna 6 "consists of a conductor which forms several windings in a spiral fashion, and may be located on the section 4 [of the identity card] by a printing process."<sup>19</sup> As FIG. 1 of Lippert (reproduced above) clearly illustrates, the antenna 6 completely bypasses the loop 9 in the identity card 1 and does not define the loop 9, as required by Applicant's independent claim 1. As further illustrated in an exploded view of the Lippert identity card, copied below, the loop 9 is a distinctly different element than the antenna 6, and, therefore, the loop 9 cannot be defined by the antenna 6.



<sup>17</sup> Lippert at Abstract.

<sup>18</sup> Lippert at col. 4, ll. 15-16.

<sup>19</sup> Lippert at col. 3, l. 67 – col. 4, l. 2.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

The fact that Lippert discloses an identity card that includes a loop 9 that can be used to secure an identity card to clothing of a user<sup>20</sup> does not in any way render Applicant's claims obvious. Applicant's independent claims clearly recite an antenna for a medical device, where the antenna defines an aperture comprising a wide end and a channel adjacent the wide end, and where the channel is formed to hold a portion of an item of clothing. The antenna 6 in Lippert does not define the loop 9. Lippert, alone or in combination with Cimochowski, fails to teach or suggest the antenna recited in Applicant's claim 1.

It is also unclear why one skilled in the art would have even looked to Wallerstorfer or Lippert to modify the external coil of Cimochowski to include define an aperture including a wide end and a narrower channel disposed adjacent to each other. Wallerstorfer and Lippert do not even teach or suggest an antenna for a medical device programmer, as required by Applicant's independent claims. On the contrary, Wallerstorfer describes a data carrier for a non-contact communication with a control station<sup>21</sup>, and Lippert describes an identity card<sup>22</sup>.

To establish obviousness, the Examiner must identify an apparent reason why one of ordinary skill in the art would have been motivated to make a modification or combination to arrive at the claimed invention.<sup>23</sup> An invention composed of several elements is not proved obvious merely by demonstrating that each of the elements was independently known.<sup>24</sup> Rather, the Office Action should identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the same way as the claimed invention. The Office Action vaguely refers to Wallerstorfer and Lippert as being in the "same problem solving area" of attaching items comprising antennas securely to clothing.<sup>25</sup> Applicant respectfully disagrees. Cimochowski, Lippert, and Wallerstorfer are not in the same problem solving area. Cimochowski is directed toward a stent with one or more sensors to sense a parameter, such as fluid flow or fluid velocity through a vessel in a patient.<sup>26</sup> On the other hand, Lippert is directed toward an identity card that helps prevent a non-entitled person from detaching the identity card

<sup>20</sup> Lippert at col. 4, ll. 9-11.

<sup>21</sup> Wallerstorfer at col. 1, ll. 46-47.

<sup>22</sup> Lippert at Abstract.

<sup>23</sup> *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007).

<sup>24</sup> *Id.*

<sup>25</sup> Office Action at pp. 3-4s.

<sup>26</sup> Cimochowski at Abstract.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

from clothing of an entitled person<sup>27</sup> and Wallerstorfer is directed toward a data carrier structure, such as for entry tickets.<sup>28</sup> The Office Action has failed to identify any apparent reason why one of ordinary skill in the relevant field would have looked to elements in Lippert and Wallerstorfer to modify Cimochowski.

Furthermore, Applicant notes that even if Wallerstorfer and Lippert were combined with Cimochowski, the combination of the references fails to disclose each and every element of Applicant's independent claim 1, such as an antenna that holds a portion of clothing by interference fit or friction fit, or an antenna that defines an aperture comprising a wide end and a narrower channel.

McEowen also fails to teach an antenna that includes an aperture comprising a wide end and a channel adjacent to the wide end formed to hold a portion of an item of clothing by interference fit or friction fit and hold the antenna in a substantially fixed position. In support of the rejection of claim 1, the Office Action found that the lanyard handle member 9 shown in FIG 1 of McEowen is an antenna defining an aperture with a wide end and a narrower channel.<sup>29</sup> Applicant respectfully disagrees with the Office Action's analysis of McEowen.

As an initial matter, it is unclear how the loop shape of the McEowen lanyard defines both a wide end and a narrower channel, where the channel is formed to hold a portion of clothing by an interference fit or friction fit. As shown in FIG 6A of Applicant's disclosure, copied above, the wide end and narrower channel are distinctly different portions of the antenna aperture. The structure of the lanyard antenna 9 shown in FIG 2 of McEowen, copied below, cannot define an aperture that includes both a wide end and an adjacent channel that is narrower than the wide end. The lanyard antenna 9 defines one aperture portion that does not include a wide end and a separate, distinctive channel, i.e., a "course through which something can be directed or moved,"<sup>30</sup> according to the Office Action.

<sup>27</sup> Lippert at col. 1, ll. 42-58.

<sup>28</sup> Col. 3, ll. 64-67.

<sup>29</sup> Office Action at p. 4.

<sup>30</sup> Office Action at p. 3.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

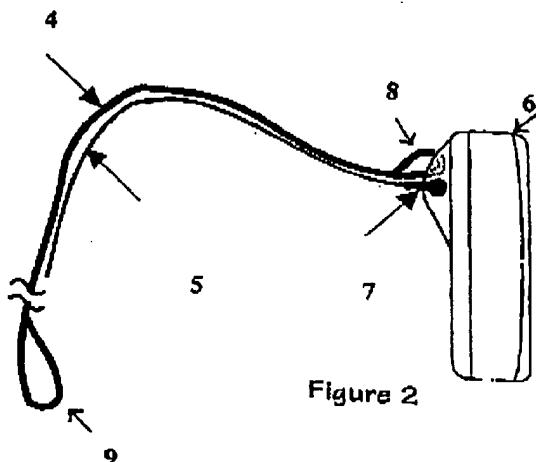


Figure 2

In accordance with claim 1, the channel must be formed to hold a portion of an item of clothing associated with a patient by an interference fit or friction fit. Thus, the channel must be formed to engage closely with the clothing to establish the interference fit or friction fit. The McEowen lanyard antenna 9 does not define such an aperture comprising a wide end and a channel that is capable of engaging closely with clothing to establish interference fit or friction fit. McEowen discloses that an "antenna conductive element is embedded within, runs alongside, or is woven into a flexible strength member" to form a lanyard antenna.<sup>31</sup> Thus, the lanyard antenna 9 is flexible. McEowen clearly and repeatedly describes the lanyard antenna as being formed from a flexible material. Given its flexible nature, the McEowen antenna would not provide enough rigidity to engage with clothing to generate a sufficient interference fit or friction fit with clothing to substantially hold the antenna in place.

McEowen discloses that this flexible antenna may be attached to a person's clothing by looping the lanyard around a person's belt or affixing it with a clip.<sup>32</sup> These two attachment techniques do not contemplate an interference or friction fit between a narrow channel defined by the antenna and clothing. Thus, McEowen, alone or in combination with Cimochowski fails to teach or suggest the antenna recited in Applicant's claim 1.

The Cimochowski reference specifically states, "[c]oupling is maximized between external coil 154 and RF antenna 30" used on the stent when the central axes of both the RF antenna and the external coil are coaxially aligned...coupling is minimized when the central axes

<sup>31</sup> McEowen at Abstract.

<sup>32</sup> McEowen at col. 3, ll. 62-65.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

of the external coil is perpendicular to the axes of the RF antenna.<sup>33</sup> Thus, Cimochowski discloses that the antenna with an aperture sized to encompass a portion of the body of a patient helps properly communicate with the implanted stent. The antenna taught by the Cimochowski reference appears to require a structure that permits positioning around the implanted stent by encompassing a body part of a patient. Indeed, it appears that the antenna described by Cimochowski would not operate as intended with the implanted stent when merely positioned relative to the implanted stent. Accordingly, it is unclear why one would modify the Cimochowski coil 154 in view of Wallerstorfer, Lippert or McEowen to merely be positioned relative to the stent, rather than around the stent.

Independent claims 18 recites a medical device programmer comprising, among other things, an antenna defining an aperture comprising a wide end and a channel disposed adjacent the wide end, wherein the channel is narrower than the wide end and is formed to hold a portion of an item of clothing associated with a patient by an interference fit or friction fit and thereby hold the antenna in a substantially fixed position relative to an implantable medical device. For at least the reasons described above with respect to claim 1, claim 18 is patentable over Cimochowski alone or Cimochowski in view of Lippert, Wallerstorfer or McEowen.

Independent claim 25 recites, among other things, a means for attaching an antenna head to an item of clothing, where the means comprises an aperture defined by the antenna head, where the aperture comprises a wide end and a channel disposed adjacent the wide end, where the channel is narrower than the wide end and is formed to hold a portion of the item of clothing associated with the patient by an interference fit or friction fit. For at least the reasons described above with respect to claim 1, claim 25 is patentable over Cimochowski alone or Cimochowski in view of Lippert, Wallerstorfer or McEowen.

Independent claims 27 and 29 recites, among other things, an antenna for a medical device programmer, where the antenna defines an aperture with a wide end to insert a portion of an item of clothing and a channel disposed adjacent the wide end that is substantially narrower than the wide end of the aperture, where the channel is formed to hold the portion of the item of clothing by interference fit or friction fit. For at least the reasons described above with respect to

---

<sup>33</sup> Cimochowski at col. 16, ll. 16-27

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

claim 1, claim 27 is patentable over Cimochowski alone or Cimochowski in view of Lippert, Wallerstorfer or McEowen.

Cimochowski alone or in combination with Lippert, Wallerstorfer or McEowen fails to disclose each and every limitation set forth in independent claims 1, 18, 25, 27, and 29, as well as claims 2-8, 16, 19-24, 26, and 30-35, which depend from one of independent claims 1, 18, 25, 27, and 29. Applicant has amended dependent claims 7, 15, and 23 to delete the reference to a tear drop shape in order to further prosecution of the present application. However, Applicant does not acquiesce in the rejections relating to the tear drop shape set forth in the Office Action.

For at least these reasons, the Office Action has failed to establish a prima facie case for unpatentability of Applicant's claims 1-8, 16, 18-27, and 29-35 under 35 U.S.C. §§ 102(b) and 103(a). Withdrawal of this rejection is requested.

*Pool*

In support of the rejection of claims 9, 11-23, 25, 26, 28, 29, and 33-35 under 35 U.S.C. §§ 102(b)/103(a) based on Pool alone or Pool in view of Lippert, Wallerstorfer or McEowen, the Office Action stated that Pool teaches an antenna housed within a belt, and that the belt inherently possesses the ability to have clothing pulled through the channel created by buckling the belt, thereby holding the antenna in a substantially fixed position relative to the implanted device.<sup>34</sup> Applicant disagrees that buckling a belt constitutes pulling clothing through a channel created by buckling the belt. Furthermore, a belt does not define an aperture comprising a wide end and a narrower channel that formed to hold a portion of an item of clothing associated with a patient by an interference fit or friction fit.

The Office Action recognized that Pool does not disclose an antenna defining an aperture comprising a wide end and a narrower channel that formed to hold a portion of an item of clothing<sup>35</sup> and cited Lippert, Wallerstorfer or McEowen as disclosing such an antenna. However, as established above, neither Lippert, Wallerstorfer nor McEowen teaches or suggests an antenna or antenna head that defines an aperture comprising a wide end and a channel adjacent the wide

---

<sup>34</sup> Office Action at p. 6.

<sup>35</sup> *Id.*

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

end, where the channel is narrower than the wide end, as required by independent claims 9, 18, 25, 28, and 29. Furthermore, neither Lippert, Wallerstorfer nor McEowen discloses or suggests an antenna that comprises a wide end and narrower channel that formed to hold a portion of an item of clothing associated with a patient by an interference fit or friction fit. Accordingly, even if Pool were combined with Lippert, Wallerstorfer or McEowen, Applicant's claims would not be rendered obvious. For example, none of the cited references teaches a method that comprises pulling at least some of a portion of an item of clothing into a channel in an antenna to thereby hold the antenna in a substantially fixed position relative to an implanted medical device, as recited by Applicant's independent claims 9 and 28.

For similar reasons discussed above with respect to the lack of motivation to combine Cimochowski with Lippert and Wallerstorfer, it is unclear why one skilled in the art would have combined the teachings of Lippert and Wallerstorfer with Pool. Pool relates to a wearable telemetry arrangement for use with a medical information communications device<sup>36</sup>, whereas Lippert relates to an identity card<sup>37</sup> and Wallerstorfer is directed toward a data carrier structure.<sup>38</sup> The fact that Lippert may teach a loop to fasten an identity card to an eye of a zip fastener slide on clothing of a person or that Wallerstorfer may disclose a fastening element for fixing a data carrier structure to clothing of a holder does not provide a motivation to combine the specific teachings of Lippert and Wallerstorfer with Pool in order to arrive at an antenna that defines an aperture comprising a wide end and an adjacent, narrower channel formed to hold a portion of an item of clothing.

It is impermissible for the Office Action to establish obviousness by demonstrating that each of the elements was independently known.<sup>39</sup> Other than the vague reference to the "same problems solving area," the Office Action has not identified an apparent reason why one of ordinary skill in the art would have been motivated to make a modification to Pool or to combine Pool with Lippert and Wallerstorfer in order to arrive at Applicant's claimed invention.<sup>40</sup> Furthermore, even if Pool was combined with either Lippert and Wallerstorfer (or McEowen), the

<sup>36</sup> Abstract.

<sup>37</sup> Abstract.

<sup>38</sup> Col. 3, ll. 64-67.

<sup>39</sup> *Id.* at 14.

<sup>40</sup> KSR, Slip op. at 14.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

combination of references does not teach an antenna defining an aperture comprising a wide end and an adjacent, narrower channel.

Pool alone or in combination with Lippert, Wallerstorfer or McEowen fails to disclose each and every limitation set forth in claims 9, 11-23, 25, 26, 28, 29, and 33-35. For at least these reasons, the Office Action has failed to establish a *prima facie* case for unpatentability of Applicant's claims 9, 11-23, 25, 26, 28, 29, and 33-35 under 35 U.S.C. §§ 102(b) and 103(a). Withdrawal of this rejection is requested.

*Taepke*

In support of the rejection of claims 1-9 and 11-35 under 35 U.S.C. § 103(a) based on Taepke in view of Lippert, Wallerstorfer or McEowen, the Office Action stated that Taepke discloses an antenna for medical devices, where the antenna defines an aperture and is formed to hold a portion of an item of clothing associated with the patient.<sup>41</sup> Applicant respectfully disagrees with the characterization given to the Taepke antenna 22. Taepke merely states that the antenna may be attached to the patient's clothing. Taepke does not indicate that the antenna necessarily attaches to the patient's clothing by holding a portion of the clothing, as required by independent claim 1. It is unclear from the figures and description in Taepke whether the antenna 22 even defines an aperture, much less an aperture that is formed to hold a portion of an item of clothing by an interference fit or friction fit, as required by Applicant's independent claims 1, 9, 18, 25, and 27-29.

Just as with Cimochowski and Pool, the Office Action recognized that Taepke fails to disclose each and every element of independent claim 1, namely, an antenna defining an aperture that comprises a wide end and a narrow channel adjacent the wide end, and cited Lippert, Wallerstorfer or McEowen as disclosing such an antenna.<sup>42</sup> However, as established above, neither Lippert, Wallerstorfer nor McEowen fail to disclose or suggest each and every element of Applicant's independent claims. For example, the references fail to teach or suggest an antenna

---

<sup>41</sup> Office Action at p. 10.

<sup>42</sup> *Id.*

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

that defines an aperture comprising a wide end and a channel adjacent the wide end, where the channel is narrower than the wide end, and where the channel formed to hold a portion of clothing by interference fit or friction fit.

For similar reasons discussed above with respect to the lack of motivation to combine Cimochowski with Lippert and Wallerstorfer, it is unclear why one skilled in the art would have combined the teachings of Lippert and Wallerstorfer with Taepke. Taepke relates to a universal adaptor between an implantable medical device and a hospital monitoring system,<sup>43</sup> whereas Lippert relates to an identity card<sup>44</sup> and Wallerstorfer is directed toward a data carrier structure.<sup>45</sup> Taepke, Lippert, and Wallerstorfer are not in the same problem solving area. The fact that Lippert may teach a ring to fasten the indicator apparatus to clothing of a skier or that Wallerstorfer may disclose a fastening element for fixing a data carrier structure to clothing of a holder does not provide a reason to combine the specific teachings of Lippert and Wallerstorfer with Taepke in order to arrive at an antenna that defines an aperture comprising a wide end and an adjacent, narrower channel formed to hold a portion of an item of clothing. Even if Taepke were modified in view of Lippert, Wallerstorfer or McEowen, the combination of references does not teach an antenna defining an aperture comprising a wide end and an adjacent, narrower channel.

Taepke alone or in combination with Lippert, Wallerstorfer or McEowen fails to disclose each and every limitation set forth in claims 1-9 and 11-35. For at least these reasons, the Office Action has failed to establish a *prima facie* case for obviousness of Applicant's claims 1-9 and 11-35 under 35 U.S.C. § 103(a). Withdrawal of this rejection is requested.

*Miesel*

In support of the rejection of claims 1-9 and 11-35 under 35 U.S.C. § 103(a) based on Miesel in view of Lippert, Wallerstorfer or McEowen, the Office Action stated that Miesel discloses an antenna for medical devices, where the antenna defines an aperture and is formed to hold a portion of an item of clothing associated with the patient.<sup>46</sup> Applicant respectfully

---

<sup>43</sup> Taepke at Abstract.

<sup>44</sup> Abstract.

<sup>45</sup> Col. 3, ll. 64-67.

<sup>46</sup> Office Action at p. 12.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

disagrees that Miesel discloses that the antenna 60 formed to hold a portion of clothing. Miesel merely states that, "antenna device 60 is shown affixed to the patient's clothing."<sup>47</sup> This does not amount to a disclosure of an antenna 60 that defines an aperture including a wide end and a narrower channel formed to hold a portion of an item of clothing by an interference fit or friction fit.

Just as with Cimochowski, Pool, and Taepke, the Office Action recognized that Miesel fails to disclose each and every element of independent claim 1, namely, an antenna defining an aperture that comprises a wide end and a narrow channel adjacent the wide end, and cited Lippert, Wallerstorfer or McEowen as disclosing such an antenna.<sup>48</sup> However, as established above, neither Lippert, Wallerstorfer nor McEowen teaches or suggests an antenna that defines an aperture comprising a wide end and a channel adjacent the wide end, where the channel is narrower than the wide end.

For similar reasons discussed above with respect to the lack of motivation to combine Cimochowski with Lippert and Wallerstorfer, it is unclear why one skilled in the art would have combined the teachings of Lippert and Wallerstorfer with Miesel. Miesel relates to a system and method for determining a patient's cardiac output,<sup>49</sup> whereas Lippert relates to an identity card<sup>50</sup> and Wallerstorfer is directed toward a data carrier structure.<sup>51</sup> The fact that Lippert may teach a ring to fasten the indicator apparatus to clothing of a skier or that Wallerstorfer may disclose a fastening element for fixing a data carrier structure to clothing of a holder does not provide a reason to combine the specific teachings of Lippert and Wallerstorfer with Miesel in order to arrive at an antenna that defines an aperture comprising a wide end and an adjacent, narrower channel formed to hold a portion of an item of clothing.

Even if Miesel was combined with Lippert, Wallerstorfer or McEowen, the combination of references fails to disclose each and every limitation set forth in claims 1-9 and 11-35. For at

---

<sup>47</sup> Miesel at col. 8, ll. 58-60.

<sup>48</sup> *Id.*

<sup>49</sup> Miesel at Abstract.

<sup>50</sup> Lipper at Abstract.

<sup>51</sup> Wallerstorfer at col. 3, ll. 64-67.

Application Number 10/693,001  
Response to Office Action mailed October 2, 2007

least these reasons, the Office Action has failed to establish a *prima facie* case of obviousness of Applicant's claims 1-9 and 11-35 under 35 U.S.C. § 103(a). Withdrawal of this rejection is requested.

### CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

By:

December 28, 2007  
SHUMAKER & SIEFFERT, P.A.  
1625 Radio Drive, Suite 300  
Woodbury, Minnesota 55125  
Telephone: 651.735.1100  
Facsimile: 651.735.1102

Jessica H. Kwak  
Name: Jessica H. Kwak  
Reg. No.: 58,975